

Brian RODRICKS et al., S.N. 09/884,810
Page 2

Dkt. 1166/68191

Amendments to the Specification

Please insert the following paragraph after line 16 on page 3:

Fig. 7 shows schematically a 3-capacitor series circuit which is equivalent to the pixel element shown in Fig. 1.

Please replace the paragraph at page 5, lines 6-16, with the following paragraph:

Pixels 24 are arranged in a two-dimensional array, with rows 40 of gate control lines 41 and columns 42 of image-output lines 43 as shown in Fig. 2. A charge amplifier 44 and related charge integrator circuit 45 is attached to each image-output line, and connected to a correlated double-sampling circuit 46, as is well-known in the art. Each pixel element is electrically similar to a 3-capacitor series circuit as represented schematically by element 60 in Figure 4. In operation, a bias electric field of up to about 10 volts per micron is created across the selenium layer by grounding the bottom of TFT array 18 and applying a high voltage to the top electrode 12, using power supply 70 (shown in Fig. 1). The detector is then exposed to x-rays as shown in Fig. 1. The resultant intensity-modulated x-ray flux generates electron-hole pairs in the selenium proportional to the amount of x-ray energy absorbed.